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Applied Research Division Research at a Glance: 2025



A Message from Our Director

Dear Valued Colleagues and Partners,

It is with great pleasure and gratitude that I present this annual research review, reflecting on the impactful endeavors of the Institute of Child Nutrition Applied Research Division (ICN ARD) from July 1, 2024, to June 30, 2025. This past year has been a testament to our collective resilience and unwavering commitment to advancing school nutrition operations knowledge in the face of evolving changes in the field. Our team consistently demonstrated exceptional adaptability, navigating dynamic research landscapes while maintaining an unwavering focus on high-quality, actionable research outcomes that will support the education and training division of the Institute of Child Nutrition and the Child Nutrition community.

A cornerstone of our recent efforts has been defined by our collaboration with organizations and institutions centered around our pioneering work in school food trends. For example, we collaborated with the McCormick Science Institute and Penn State to identify nutrient content and the potential for modifying recipes to reduce sodium and added sugar, using the ICN ARD's inaugural Food Trends in K-12 survey. These collaborations yielded crucial insights into recipe development for the K-12 environment. Building on this momentum, ICN ARD developed a new partnership with the International Fresh Produce Association on the second annual Food Trends in K-12 survey for the 2025-2026 school year, focusing on the vital role and popularity of fresh fruits and vegetables in school meals. These collaborations are a testament to our dedication to conducting quality research and building bridges with organizations that also serve our stakeholders.

Another significant achievement for the ICN ARD was the successful conclusion of Grant Year 2022 research activities. Our commitment to providing timely and relevant insights was demonstrated through a series of rapid response surveys addressing critical topics, including training needs for child nutrition program professionals, and challenges and supports for the School Nutrition Program and the Child and Adult Care Food Program professionals. The results of these surveys were swiftly converted into easily digestible reports, readily available on the Institute of Child Nutrition's website. Furthermore, our division successfully developed a competency, knowledge, and skills (CKS) resource for chefs working in schools. The CKS research is our cornerstone research and is unique to the ICN ARD. The outcomes of this fundamental CKS research were widely disseminated through a successful webinar and translated into a practical CKS resource for School Nutrition Programs, directly supporting their hiring and training initiatives.

The achievements of the ICN ARD for 2024-2025 reflect the dedication, innovation, and collaborative spirit of every member of our research team. We extend our deepest appreciation to all our internal and external collaborators, including Dr. Trend Gould, Dr. Melissa Thompson, Dr. Kelly Lucas, and Dr. Aleshia Hall-Campbell, whose support, guidance, and partnerships are integral to our success. We look forward to our continued partnerships and making a meaningful impact on child nutrition in the year ahead.

Warm regards,

Marjuyua Lartey Gibson, PhD, RDN

Director

**Institute of Child Nutrition Applied Research Division
The University of Southern Mississippi**



The Latest ARD Research

Environmental Culinary Training Needs of School Nutrition Professionals: Perspectives from the Field

This study aimed to (1) identify culinary training topics of highest priority by school nutrition professionals, (2) determine the preferred training duration, delivery methods, time of day, and month of the year, and (3) explore whether responses differ according to professional job titles. This study's target audience included a nationally representative sample of school nutrition professionals and State Agency professionals. The results indicated that self-paced virtual training and in-person lectures with hands-on activities should be offered. The training should be relatively short, consisting of 1–2 hours or a 30-minute session, either late afternoon (2 p.m. to 4 p.m.) or early morning (7 a.m. to 10 a.m.). August was the best month for training, followed by June or July, while there was also interest in October.

Challenges and Issues in Child Care Centers Participating in the Child and Adult Care Food Program (CACFP)

Limited research and data exist nationally on challenges child nutrition program (CNP) professionals face, indicating a gap in information on possible issues that child care operators may experience while implementing the CACFP. To investigate this gap, the ICN ARD conducted a study to assess the challenges and issues impacting CACFP operations. The CACFP stakeholders for this study included family child care and child care operators serving CACFP meals, State agencies, ICN personnel, national CNP organizations, and USDA FNS representatives who provided CACFP training, resources, and technical support. These participants served in different capacities as subject matter experts, expert panel and review panel members, and survey participants for this project. Respondents to this rapid response survey indicated that they have experienced CACFP food, training, facility and supply, and nutrition education resource challenges in maintaining compliance with the program's standards. The data for this project can be used to bridge the gap between CACFP policies and the practical implementation of the program. It can also be used to explore the challenges and issues experienced in child care settings serving CACFP meals; stakeholders can better align training, create and improve resources, and offer technical assistance that aids in the improvement of operational practices used to meet these standards. The additional information shared by CACFP stakeholders offers valuable insights into improving the CACFP in child care settings that can also be used to justify improvements in resources and develop tools for CACFP operators.

The Latest ARD Research

Determining the Training Needs of Child Nutrition Professionals

The objectives of this study were to identify the training topics that are most needed by child nutrition professionals based on operation type (school nutrition and CACFP) and position title (staff and management) over the next two years, and to determine the ideal training modes for child nutrition professionals to receive specific training topics. This study consisted of two phases: Phase I focused on survey development and included a literature review, the development of a draft survey (based on the literature review), and an expert review panel to evaluate the draft survey. Phase II included the pilot of the draft survey, data collection, and analysis utilizing the finalized survey. Survey results yielded a wide range of information. One of the notable revelations is menu planning was selected as a high level of need for training, and in all three training modes: in-person live, live virtual, and self-paced online.

Competencies, Knowledge, and Skills for Chefs Working in School Nutrition Programs

This three-phase study is ICN ARD's featured study for the year. The final product of this study was the development of the resource, *Competencies, Knowledge, and Skills of Effective School Nutrition Chefs*. More information about this study is available in the *Research Spotlight* portion of this *Research Brief*.

Recent ARD Presentations & Publications

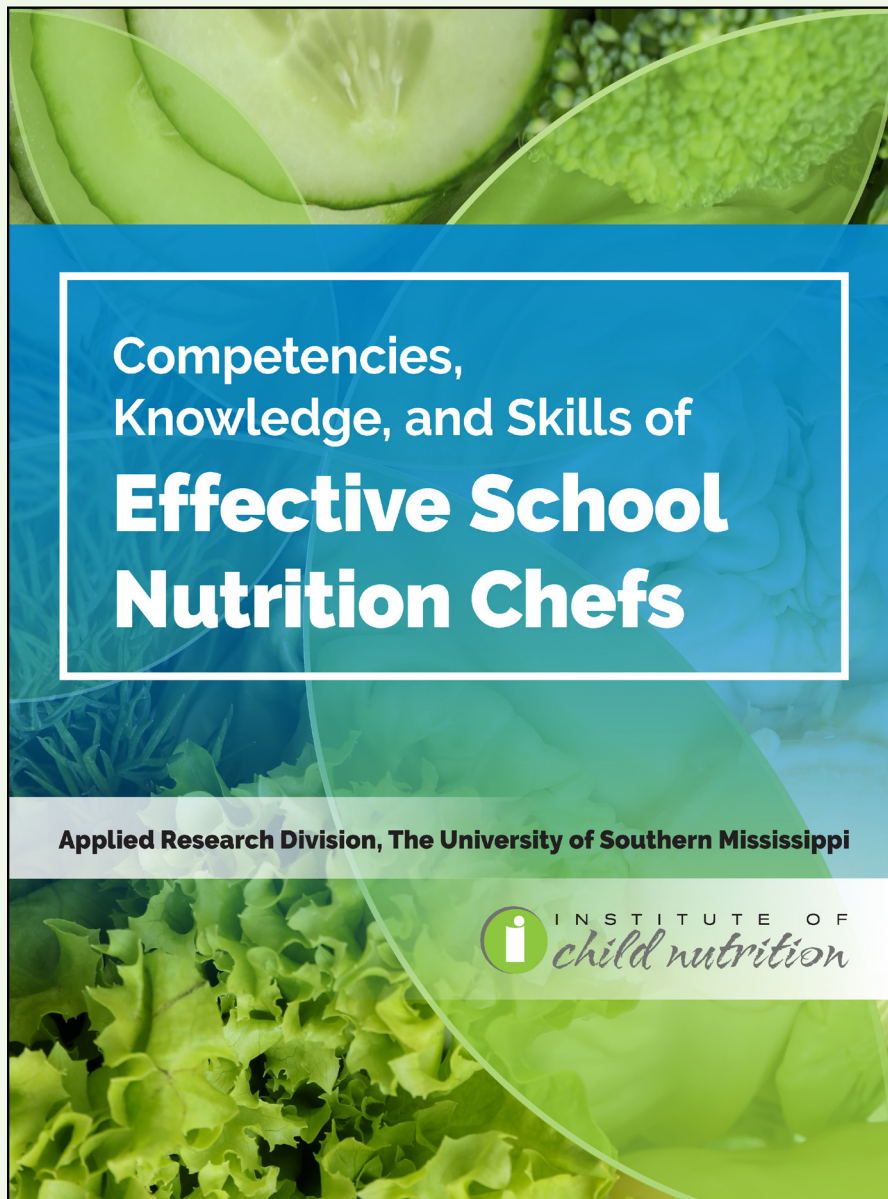
Presentations

- Al Juboori, R., & Shahan, M., & Rushing, K. (November 2025). Rapid Response Survey #3: Determining the Training Needs of Child Nutrition professionals. American Public Health Association 2025 Annual Meeting and Expo, Washington, D.C
- Lartey Gibson, M., & Peterson, J. (2025, March 6). CICN: A Roadmap for Success: Competencies, Knowledge, and Skills for Chefs in Schools. [Webinar]. Institute of Child Nutrition.
- Lartey Gibson, M., Schaefer, S., & Al Juboori, R. (2025, January 20). Serving Up Success: Exploring Culinary Trends to Enhance K-12 School Nutrition Programs. School Nutrition Industry Conference 2025: Phoenix, AZ
- Peterson, J. Culinary Training Needs of School Nutrition Professionals Results. May 27, 2025, Zoom presentation of the survey results to the CICN team.
- Rushing, K. & Lartey Gibson, M. (Hosts). (2024, July). Research Unboxing: Shifting perceptions of school breakfast programs (Season 3, Episode Four). [Video podcast episode]. In School Food for Thought: A Podcast by School Nutrition Association. <https://schoolnutrition.org/resource/podcast-s3-ep6-research-unboxing-shifting-perceptions-of-school-breakfast-programs/>
- Rushing, K. Presentation to ICN Education and Training Staff. Topics: Results of GY22 Rapid Response Training Needs Assessment and GY21 Evaluation of ICN VILTs
- Sweeney, S., Fitzgerald, S., Lartey Gibson, M., & Rowe, K. (2024, September 19). USDA: Creating Your Road Map to School Menu Planning Success! [Webinar]. Institute of Child Nutrition.

Publications

- Al Juboori, R., Shahan, M., & Rushing, K. *Determining the Training Needs and Delivery Preferences of Child Nutrition Professionals: A National Study*. Journal of Nutrition Education and Behavior (In Press).
- Lartey Gibson, M. (2025). *Institute of Child Nutrition Applied Research Division Research Updates*. Journal of Child Nutrition and Management, 48(2).
- Peterson, J. & Gordon, K. (2025). *Cooking Up Success: Redefining Culinary Excellence*. Served Diginine March (30), 32–33.

Research Spotlight: A Resource for Chefs in School Nutrition Settings



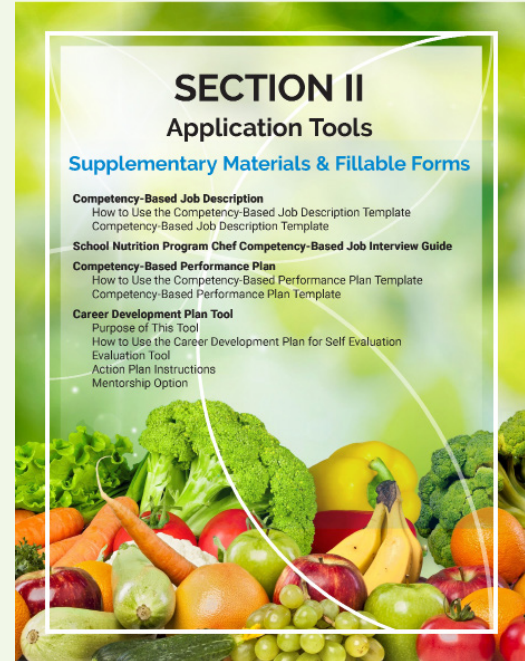
Competencies, Knowledge, and Skills of **Effective School Nutrition Chefs**

Applied Research Division, The University of Southern Mississippi

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The Competencies, Knowledge, and Skills of Effective School Nutrition Chefs resource is a comprehensive guide designed to empower culinary professionals working in school nutrition programs and to assist school nutrition professionals in finding the perfect chef for their programs. The resource is divided into two sections. Section one outlines the essential competencies, knowledge areas, and skills that school nutrition chefs need to successfully manage and deliver nutritious, appealing, and safe meals to students while maintaining compliance with nutritional standards and regulations. Section two provides guidance to school nutrition professionals hiring chefs about creating job descriptions, the interview process, and future job evaluations and career development. This promises to be a key resource for future professionals looking to expand scratch cooking and whole foods within their programs.

Research Spotlight: A Resource for Chefs in School Nutrition Settings



Section One focuses on the functional areas, competencies, knowledge, and skills needed for chefs to operate a school nutrition program effectively. Within the functional areas are 31 competencies, 153 knowledge statements, and 125 skill statements. The knowledge and skill statements were classified as knowledge and skills needed when the chef was hired (at entry level) or at an advanced stage in the professional's career (advanced level). The functional areas, competencies, knowledge, and skills identified for this resource will offer guidance for the role of the school nutrition chef at all levels.

Section Two consists of pre-made, fillable forms created in Microsoft Word. These documents are free to download and are fully customizable. These forms provide a vital boost in taking the first step towards implementing CKS for chefs in a school nutrition setting. School nutrition professionals need not reinvent the wheel; these forms are ready and at their fingertips.

Get Your Free Copy Today!

To get your free copy of these digital resources, visit <https://theicn.org/research/> or scan the QR code.





Featured Researcher: Dr. Keith Rushing

The following is an excerpt from an interview with Dr. Keith Rushing conducted by ARD's editor and research assistant, Shellie Hubbard.

As a researcher, you have submitted articles to peer-reviewed journals. Now you are the editor of the *Journal of Child Nutrition & Management* (JCNM). What has that transition been like? What have you learned?

It is an honor, a privilege and a big responsibility to be asked to be the editor of the primary peer-reviewed publication in the field of child nutrition management. I am humbled by the experience of getting a first look at the new research in our field. I have learned that a lot goes on behind the scenes to ensure each publication is ready. Identifying and securing a good peer review team is invaluable.

As an editor, what are the top mistakes you've seen researchers make when submitting research? (Examples: Is the research off topic? Filled with grammatical errors or typos? Not sufficiently vetted through peer review? Is the researcher difficult to contact? Do they miss deadlines?)

The common problem most people make is simply not following the journal guidelines. They are available online for anybody interested in submitting their work for consideration.

What would you say are top standout qualities of work that is accepted for publication?

I think the best research for our publication provides practical and helpful information for our readers. Our audience is broad and includes school/child nutrition professionals involved in administration and practice; public policy stakeholders at local, agency, state, regional, and national/intergovernmental levels; and students, faculty, researchers, school community members, school administrators, and organization/industry representatives with interest in child nutrition programs.

What tips or advice would you like to give to researchers who aspire to have their research published in a peer-reviewed journal?

Have a mentor you respect in your field review your manuscript prior to submission. Be sure to follow the JCNM reprint guidelines and final checklist.

Featured Researcher: Dr. Keith Rushing

Before you took on the additional role as editor, your career largely involved research in the field of school nutrition. Can you tell us anything about that journey, and how you became interested in the field of nutrition research and education?

I have been a dietitian for over 30 years, working in a variety of clinical and foodservice management positions. A few years after receiving my doctorate in institution management from Texas Tech University, I began conducting research for the Institute of Child Nutrition, where I found my niche, and I have not looked back.

In your role as a Research Scientist for the Institute of Child Nutrition, Applied Research Division, what current research projects or initiatives do you find particularly exciting or promising?

My primary areas of research interest are efficiency, productivity, and financial management as they relate to the operation of child nutrition programs.

How do you stay up to date with the latest developments and research in the field of nutrition? How do you incorporate new findings into your work?

I like to review journals. Publications that I keep an eye on are the *Journal of Child Nutrition & Management*, the *Journal of Nutrition Education and Behavior*, and the *Journal of the Academy of Nutrition and Dietetics*. I also stay current with research and resources available through the USDA FNS website and with local and national news.

What advice would you give to aspiring researchers or educators in the field of nutrition who are looking to make a positive impact in their communities?

I know it sounds simple, but find an area you are passionate about and get involved. The field of child nutrition is vast and filled with opportunities and areas of need. When you discover a niche that speaks to you, dive in and focus on it.



About the ARD

The Applied Research Division (ARD) conducts *applied research* projects that address *operational issues* impacting Child Nutrition programs.

What is Applied Research?

- i** Addresses real-world issues
- i** Finds solutions to everyday problems
- i** Has immediate and practical applications of the findings

What Are Operational Issues?

- i** The processes, functions, and regulations surrounding a child nutrition program that culminate in the delivery of food and nutrition services.

Our Projects Focus On:

- i** Continuous improvement of child nutrition programs
- i** Strengthening the competence within the child nutrition profession
- i** Operational issues

We Use the Following Methodologies:

- i** National surveys
- i** Case studies
- i** Expert work groups/national review panels
- i** Request for Application/
Request for Proposal

Our Strategic Priorities

The ARD supports the ICN mission to provide relevant research-based information and services that advance the continuous improvements of child nutrition programs by systematically conducting research and developing projects that influence child nutrition operational practices.

ARD Research Areas



Operational Accountability



Wellness



Equipment/Facility Design



Human Resources



Customer Service



Green/Environmental Conservation



Best Practices



Program Evaluation



Meet Our ARD Team



Dr. Marjuyua Lartey Gibson is the Director of the Institute of Child Nutrition Applied Research Division at The University of Southern Mississippi. She completed a PhD in Nutrition and Food Systems at The University of Southern Mississippi, and her career encompasses over 27 years of teaching, research, and practice in the field of nutrition and dietetics. Dr. Lartey has spent the last 14 years of her career conducting research related to youth and Child Nutrition Programs.



Dr. Keith Rushing is a Research Scientist with the Institute of Child Nutrition Applied Research Division. Keith holds a Doctorate Degree in Family and Consumer Sciences Education from Texas Tech University and is a registered dietitian. His work experience includes 12 years in healthcare and school foodservice management and 17 years at The University of Southern Mississippi, 11 of those at the Institute of Child Nutrition Applied Research Division as a research scientist and two as director.



Dr. Kristi L. Lewis is a Research Scientist with the Institute of Child Nutrition Applied Research Division, an educator, and registered dietitian in private practice for her business, K. Lewis Consulting, LLC. For over 20 years, her nationally recognized research has focused on childhood obesity, community health programs, the development of best practices for serving young children, and exploring wellness in child care operational issues facing foodservice staff.



Dr. Jane Peterson is a Research Scientist with the Institute of Child Nutrition Applied Research Division. Jane holds a Doctorate in Biological Sciences with an emphasis in Nutrition from South Dakota State University. Dr. Peterson has over 30 years of experience in nutrition practice, education, and research. Dr. Peterson is a member of the School Nutrition Association and the Academy of Nutrition and Dietetics (AND) professional organizations. Within AND, she is a member of the dietetic practice group (DPG) for research and the school nutrition services (SNS) DPG.



Dr. Kymberle Gordon is a Research Scientist with the Institute of Child Nutrition Applied Research Division. She received her Doctor of Philosophy in Nutrition from the University of Mississippi. During her time at The University of Mississippi, she was a research consultant for the Institute of Child Nutrition, and the Applied Sciences Research and Analytics Lab, an adjunct professor in community nutrition, and both a Teaching and Research Assistant for the Department of Nutrition and Hospitality Management.



Karen Mullins has returned to continue serving as Research Administrator for the Institute of Child Nutrition Applied Research Division. Her primary role at ARD is budget and daily operations management. She brings 19 years of overall experience with The University of Southern Mississippi and nine years of prior service with the Institute of Child Nutrition.



Shellie Hubbard is a Research Assistant for the Institute of Child Nutrition Applied Research Division. In 2001, she received a Master of Arts in Creative Writing from The University of Southern Mississippi. She began her work with the institute twenty years ago as an editor and writer, then expanded her role to include graphic design.

And last, but not least... ***You!***

Our research would not be possible without the invaluable contributions from professionals of all walks of career and life in the field of child nutrition. State agencies, directors, managers, chefs, cooks, nutritionists, statisticians, educators, child care providers, parents, students... the list is long and keeps growing. Thank you for all that you do to volunteer and contribute your voice to the work that we do.



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(<http://www.theicn.org/research>) to learn more about the
projects and research conducted.

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